

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Stewart, Kenneth A. et al. Group Art Unit:
 Application No.: Examiner:
 Date Filed: 10/17/03 Batch No.:
 Title: MULTI-PASS INTERFERENCE REDUCTION IN A GSM
 COMMUNICATION SYSTEM

INFORMATION DISCLOSURE STATEMENT (IDS)

Commissioner For Patents
 Alexandria, VA 22313-1450

SIR:

In accordance with 37 C.F.R. §1.56 and in compliance with 37 C.F.R. §§1.97 and 1.98, the references listed on attached Form PTO/SB/08 and/or subsequently identified herein, are being submitted herewith for consideration by the United States Patent and Trademark Office.

I. COPIES

- a. ☒ A legible copy of (i) each U.S. and foreign patents; (ii) each publication or that portion which caused it to be listed; and (iii) all other information or that portion which caused it to be listed, is included herewith.
- b. ☐ Any patents, publications or other information which are listed on PTO/SB/08 which are not enclosed herewith were previously cited by or submitted to the PTO in one of the following applications which has been relied upon for an earlier filing date under 35 U.S.C. §120:

U.S. Serial Number

U.S. Filing Date

II. CONCISE EXPLANATION OF THE RELEVANCE (check at least one box)

- a. ☒ Except as may be indicated below in (b) of this section, all of the patents, publications or other information are in the English language (concise explanation not required).
- b. ☐ A concise explanation of the relevance of all patents, publications or other information listed that is not in the English language is as follows:
- c. ☐ The following additional information is provided for the Examiner's consideration:

III. ☐ CROSS REFERENCE TO RELATED APPLICATION(S)

The Examiner is advised that the following co-pending application(s) contain(s) subject matter that may be related to the present application. By bringing this (these) applications to the Examiner's attention, Applicant(s) does(do) not waive the confidentiality provisions of 35 U.S.C. §122.

Serial No.

Filing Date

Art Unit

FEES

IV. ☒ THIS IDS IS BEING FILED UNDER 37 C.F.R. §1.97(b): (check one box)

- a. ☒ within three months of the filing date of a national application other than a continued prosecution application under § 1.53(d) (37 C.F.R. §1.97(b)(1)). No fee or statement is required.
- b. ☐ within three months of the date of entry of the national stage as set forth in § 1.491 in an international application (37 C.F.R. §1.97(b)(2)). No fee or statement is required.
- c. ☐ before the mailing date of a first Office Action on the merits (37 C.F.R. §1.97(b)(3)). No fee or statement is required.
- d. ☐ before the mailing date of a first Office Action after the filing of a request for continued examination under § 1.114 (37 C.F.R. § 1.97(b)(4)). No fee or statement is required.

- V. ☐ THIS IDS IS BEING FILED UNDER 37 C.F.R. §1.97(c): (check one box)
 before the mailing date of any of a Final Office Action under 37 C.F.R. §1.113, a Notice of Allowance under 37 C.F.R. §1.311, or an action that otherwise closes prosecution in the application (See 37 C.F.R. §1.97(c)).
- a. ☐ No statement; therefore, charge Deposit Account **502117** the fee set forth in 37 C.F.R. §1.17(p).
- b. ☐ See the statement below. No fee is required.
- VI. ☐ THIS IDS IS BEING FILED UNDER 37 C.F.R. §1.97(d):
 on or before payment of the issue fee and is accompanied by the following:
- 1) a statement under 37 C.F.R. §1.97(e) as provided below; and
- 2) charge Deposit Account **502117** the petition fee set forth in §1.17(p).
- VII. ☐ STATEMENT UNDER 37 C.F.R. §1.97(e) (check only one box, if applicable)
 The undersigned hereby states that
- a. ☐ each item of information contained in the IDS was cited in a communication from a foreign Patent Office in a counterpart foreign application not more than three months prior to the filing of IDS; or
- b. ☐ no item of information contained in the IDS was cited in a communication from a foreign Patent Office in a counterpart foreign application, and to knowledge of the person signing the statement after making reasonable inquiry, no item of information contained in the IDS was known to any individual designated in 37 C.F.R. 1.56(c) more than three months prior to the filing of this statement, or
- c. ☐ some of the items of information contained in the IDS were cited in a communication from a foreign Patent Office. As to this information, the undersigned states that each item of information contained in the IDS was cited in a communication from a foreign Patent Office in a counterpart foreign application not more than three months prior to the filing of this IDS. As to the remaining information, the undersigned hereby states that no item of this remaining information contained in the IDS was cited in a communication from a foreign Patent Office in a counterpart foreign application or, to the knowledge of the person signing the statement after making reasonable inquiry, no item of information contained in the IDS was known to any individual designated in 37 C.F.R. 1.56(c) more than three months prior to the filing of this statement.
- VIII. PAYMENT OF FEES
- ☐ A check in the amount of _____ is enclosed for the above-identified fee(s).
- ☐ Please charge Deposit Account **502117** in the amount of \$180.00 for the above-indicated fee(s).
- ☒ If Applicant has overlooked any additional fees, or if any overpayment has been made, the Commissioner is hereby authorized to credit or debit Deposit Account **502117**.
- ☐ Two Copies of this paper are attached for Deposit Account charges and debits.

The above references are being cited only in the interests of candor and without any admission that they constitute statutory prior art or contain matter which anticipates the invention or which would render the same obvious, either singly or in a combination, to a person of ordinary skill in the art.

If the Examiner has any questions concerning this IDS, he/she is requested to contact the undersigned. If it is determined that this IDS has been filed under the wrong rule, the PTO is requested to consider this IDS under the proper rule (with a petition if necessary) and charge the appropriate fee to Deposit Account **502117**.

Respectfully submitted,
 Stewart, Kenneth A. et al.

Shigeharu Furukawa 10/17/03
 Shigeharu Furukawa
 Agent for Applicant(s)
 Reg. No. 50,481
 Tel. 847-523-1987

MOTOROLA, INC.
 Customer Number 20280

Enclosures: ☒ PTO/SB/08
☒ References
☐ Foreign Search Report
☐ Other:

PTO/SB/08A (04-03)

Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)				Complete if Known	
				Application Number	
				Filing Date	
				First Named Inventor	
				Group Art Unit	
Examiner Name					
Sheet	1	of	2	Attorney Docket Number	
				CS23196RL	

U. S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number -Kind Code ² (if known)			
		US - 5,933,768	08-03-1999	Skold et al.	
		US – 6,026,130	02-15-2000	Rahmatullah et al.	
		US – 6,044,111	03-28-2000	Meyer et al.	
		US – 2002/0131488 A1	09-19-2002	Alpress et al.	
		US – 2002/0131489 A1	09-19-2002	Alpress et al.	
		US - 10/366,106	02-13-2003	Buckley et al.	

FOREIGN PATENT DOCUMENTS							
Examine r Initials*	Cite No. ¹	Foreign Patent Document		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³	Number ⁴ Kind Code ² (if known)				
		WO	98/16021	04-16-1998	Statistical Signal Processing Inc.		
		WO	00/64061	10-26-2000	Telefonaktiebolaget LM Ericsson		
		WO	01/50291 A1	07-12-2001	Leonard et al.		

Examiner Signature		Date Considered	
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EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation, if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² See Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English Language Translation is attached.

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Substitute for form 1449A/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application Number	
				Filing Date	
				First Named Inventor	
				Group Art Unit	
				Examiner Name	
(use as many sheets as necessary)				Attorney Docket Number	
Sheet	2	of	2	CS23196RL	

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		"Downlink GMSK Interference Suppression Performance Evaluation", 3GPP TSG GERAN #9, Seattle, WA, USA, April 15 th -19 th 2002, Ericsson, 15 pages	
		"Single Antenna Interference Cancellation in MS for GSM Networks", 3GPP TSG-GERAN #9, Seattle, WA, USA, April 15 th -19 th 2002, Cingular Wireless, Philips Semiconductors, SBC Technology Resources, Inc., 4 pages	
		"Laboratory & Field Testing of SAIC for GSM Networks", 3GPP TSG GERAN #11, Los Angeles, CA, USA, Cingular Wireless, Philips Semiconductors, 20 pages	
		PIERO CASTOLDI, RICHARDO RAHELI AND GIOVANNI MARION, "Efficient Trellis Search Algorithms for Adaptive MLSE on Fast Rayleigh Fading Channels", Dipartimento di Ingegneria dell'Informazione, Universita di Parma, Parma - Italy, 1994 IEEE, 5 pages	
		ABDULRAUF HAFEEZ, KARL J. MOLNAR, GREGORY E. BOTTOMLEY, "Co-Channel Interference Cancellation for D-AMPS Handsets", EECS Dept., U. of Michigan, Ericsson Inc., 1999 IEEE, 6 pages	
		HAFEDH TRIGUI AND DIRK T.M. SLOCK, "Training Sequence Based Multiuser Channel Identification for Co-Channel Interference Cancellation in GSM", Institut EURECOM, France, 1999 IEEE, 20 pages	
		OMA Open Mobile Alliance "Download Architecture Version 1.0", Version 10-June-2002, 24 pages	

Examiner Signature	Date Considered
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EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation, if not in conformance and not considered. Include copy of this form with next communication to applicant.

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